Enhancement Kit

Dealer's Installation Instructions

The Apple™ IIe Enhancement Kit gives the Apple IIe many of the advanced features found in the Apple IIc, including faster processing, MouseText character display, and support of interrupts for applications such as networking.

What to Replace

To upgrade an Apple IIe, you will replace these four integrated circuit chips with new chips from the Apple IIe Enhancement Kit:

- the microprocessor (replacing the 6502 with a 65C02)
- the CD Monitor ROM
- the EF Monitor ROM
- the Character Generator ROM

Figure 1 shows the locations and part numbers of the chips to be replaced on a U.S. (NTSC) main logic board; Figure 2 shows the same things on a European (PAL) main logic board.

Figure 1. Chips on U.S. (NTSC) Main Logic Board

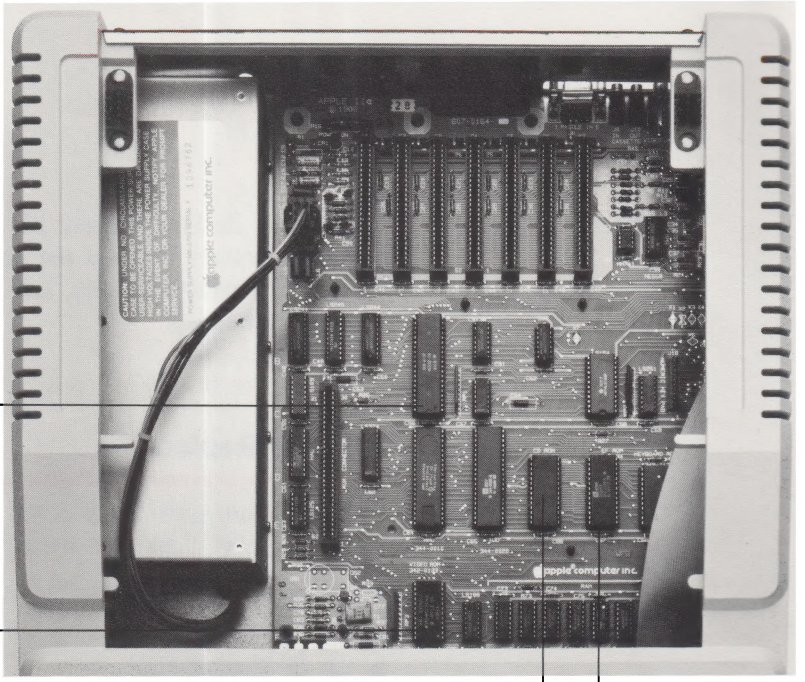
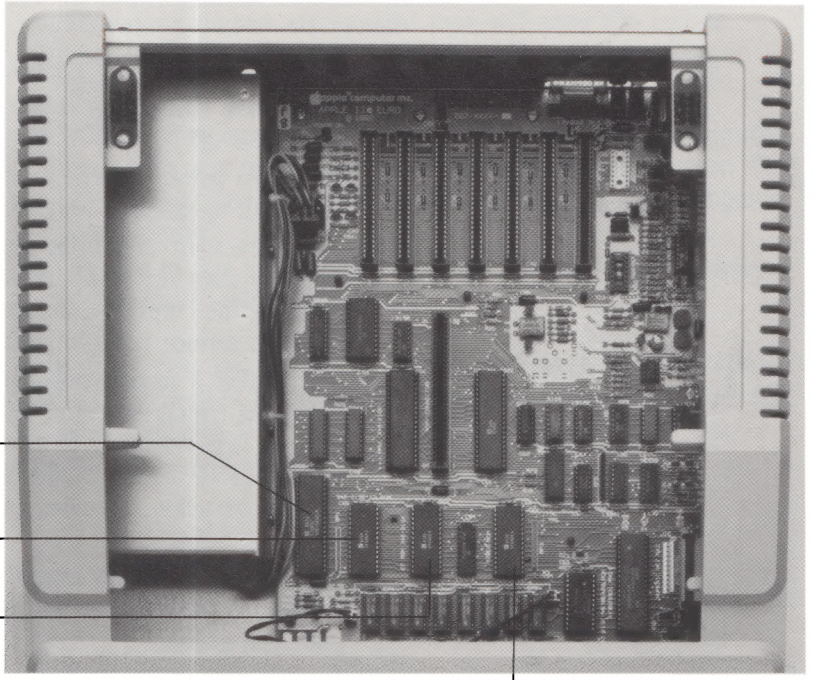


Figure 2. Chips on European (PAL) Main Logic Board



6502 Microprocessor
370-6502

Monitor ROM (CD)
342-0135

Monitor ROM (EF)
342-0134

Character Generator ROM

How to Replace the Chips

Here is the installation procedure.

1. Turn off the power switch but leave the computer plugged in.
2. Remove the cover, then check to be sure the small red light inside the case is off.
3. Touch the power supply case to discharge any electricity that may have built up on your body or clothes.
4. Locate the four chips to be replaced. (Refer to Figure 1 if you're changing the chips in a U.S. Apple IIe; refer to Figure 2 if you're changing the chips in a European Apple IIe.) You may need to remove interface cards to get to the chips.
5. Using either a small screwdriver with a narrow, flat blade or an integrated circuit extractor, GENTLY rock the chips out of their sockets. It is very easy to accidentally pull up the socket along with the 6502, so be careful. We recommend using the screwdriver for the extraction, removing each end of the chip a little bit at a time.
6. Remove the new chips from the piece of antistatic foam. Embed the feet of the old chips in the foam, then label the old set and put them away.
7. Identify each of the new chips. Table 1 shows the part numbers for the new chips. Notice that you install the same monitor ROM CD, monitor ROM EF, and 65C02 microprocessor for both U.S. and European IIe's — but you must install a different character generator ROM for each country.

Table 1. Part Numbers for New Chips

Chip Name	Part Number
Monitor ROM (CD)	342-0304
Monitor ROM (EF)	342-0303
65C02 Microprocessor	338-6503
Character Generator ROM (U.S.)	342-0265
Character Generator ROM (United Kingdom)	342-0273
Character Generator ROM (French)	342-0274
Character Generator ROM (German)	342-0275
Character Generator ROM (Italian)	342-0276
Character Generator ROM (Western Spanish)	342-0307
Character Generator ROM (Western French)	342-0306

8. Notice that there is a small notch on one end of each chip. This notch should face the keyboard when the chip is in place. Align all of the pins of a chip so that they will enter the sockets without bending. Press down evenly on the chip until it is in place.
9. When you've installed all of the new chips, replace any interface cards you may have removed and close the computer cover. Turn on the computer and run a program to make sure the computer works properly.
10. Be sure to give your customer a copy of *About Your Enhanced Apple IIe: User's Guide*.

Note: Some programs written for the Apple IIe may display MouseText characters instead of highlighted uppercase characters when they are run on the enhanced IIe. See *About Your Enhanced Apple IIe: Programmer's Guide* for details.